

Patent Claims:

1. Process for producing a raw mixture for sintering, containing ore with a fines fraction, at least one addition, returned sintered material from a subsequent sintering process and optionally a binder, by mixing and granulation, characterized in that the returned sintered material is added after the ore has been mixed with the addition and with the optional binder.
2. Process according to Claim 1, characterized in that the returned sintered material is added prior to the granulation, preferably prior to a final granulation process.
3. Process according to Claim 1 or 2, characterized in that the returned sintered material is added during the granulation process, preferably during the final granulation process.
4. Process according to one or more of Claims 1 to 3, characterized in that the point at which the returned sintered material is added can be varied, i.e. can be set from after mixing to just before completion of the granules.
5. Process according to one or more of Claims 1 to 4, characterized in that a fuel is added during a stage of the granulation in which unsintered granules which are forming are of the size which is desired for further processing.
6. Process according to one or more of Claims 1 to 5, characterized in that the mixing is carried out as intensive mixing in which the material to be mixed is mixed in a container by means of a mixing tool, with a relative movement taking place between the container and the mixing tool.

7. Installation for producing a raw mixture for sintering, containing ore with a fines fraction, at least one addition, returned sintered material from a subsequent sintering process and optionally a binder, which installation has a mixer (3) for mixing the ore, the addition and the binder which is optionally added, and downstream of which mixer there is a pelletizing device (7), characterized in that the pelletizing device is designed as a granulating drum (7), and in that a delivery device (27, 32, 34) which feeds returned sintered material to the mixture is provided.
8. Installation according to Claim 7, characterized in that the delivery device (27) for returned sintered material leads to a delivery device (6) which leads from the mixer (3) to the granulating drum (7).
9. Installation according to Claim 7 or 8, characterized in that a delivery device (32, 34) which returns returned sintered material projects into the granulating drum (7).
10. Installation according to Claim 9, characterized in that the discharge location of the delivery device (32, 34) for discharging the returned sintered material is variable within the longitudinal extent of the granulating drum (7).
11. Installation according to one or more of Claims 7 to 10, characterized in that the delivery rate of the delivery device (32) for the returned sintered material is variable.
12. Installation according to one or more of Claims 7 to 11, characterized in that the mixer (3) is designed as an intensive mixer, the mixer (3)

having a container (18, 33) into which a mixer tool (16, 17) projects, and it being possible to set a relative movement between the container (18, 33) and the mixer tool (16, 17).

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13. Installation according to Claim 12, characterized in that the mixer (3) is designed as a horizontal or vertical shaft mixer with blades or paddles (17) arranged on at least one shaft (16).

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14. Installation according to one or more of Claims 7 to 13, characterized in that an addition device (9) for adding fuel, such as coke, is provided within the granulating drum (7), the discharge location (10) of the addition device (9) being provided downstream of the discharge location for discharging the returned sintered material, as seen in the direction in which the raw mixture for sintering is conveyed.

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15. Installation according to one or more of Claims 7 to 14, characterized in that the mixer is formed integrally with the granulating drum.

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16. Installation according to one or more of Claims 7 to 15, characterized in that the installation is designed for a capacity of more than 450 t/h, in particular for a capacity of more than 500 t/h, of raw mixture for sintering.